

CLAIMS:

1. A laminate for forming structural members including:

a laminated core having a center film of a biaxially oriented thermoset polyester resin having opposite outer surfaces, a film of a thermoplastic adhesive resin attached to each of said outer surfaces of said center film, each of said adhesive resin films having an outer surface, and an outer laminated sheathing attached to each of said outer surfaces of said adhesive resin films of said core,

each of said outer laminated sheathings includes outer films of a biaxially oriented thermoset polyester resin with said outer films of biaxially oriented thermoset polyester resin connected by at least one center film of a thermoplastic adhesive resin.

2. The laminate of claim 1 in which said biaxially oriented thermoset polyester resin is polyethylene terephthalate and said thermoplastic adhesive resin is polyethylene.

3. The laminate of claim 2 in which each of said outer films of said outer laminated sheathings is connected by a pair of center films of polyethylene adhesive.

4. The laminate of claim 1 in which said outer films of each of said sheathings which are positioned adjacent said core include an additional film of thermoplastic adhesive located adjacent said outer surface of each of said adhesive resin films of said core.

5. The laminate of claim 1 in which each of said films of said core are approximately one mil thick.

6. The laminate of claim 1 in which each of said films of said outer sheathing are approximately seven mils thick.

7. A structural member having a pair of load supporting layers each formed by a laminate of multiple adhesive and structural films, with each structural film of said laminate being a biaxially oriented thermoset polyester resin, with each of said load supporting layers positioned to receive a load in a direction of said orientation of said structural films.

8. The structural member of claim 7 in which said biaxially oriented thermoset polyester resin is polyethylene terephthalate and said adhesive film is polyethylene.

9. The structural member of claim 7 in which said laminate of multiple adhesive and structural films includes:

a laminate core having opposite outer surfaces,

a film of thermoplastic adhesive resin attached to each side of said center film,

and

an outer laminated sheathing of said structural films attached to each of said opposite outer surfaces of said core.